

## Ergonomics demonstration project: Spilker Masonry

### Need

Masonry workers in Washington State have had a high rate of Work-Related Musculoskeletal Disorders (WMSDs). From 1991-1998, the average annual incidence rate for these back, neck, shoulder, elbow and wrist claims was 102.3 per 1,000 full-time equivalent workers. The high number of upper-body injuries in masonry results in significant financial and personal costs to workers and employers.

Handling masonry products is physically demanding work and these jobs make up a large portion of the masonry workforce. Handling block, brick and tile involves different tasks such as lifting, buttering, placing and cleaning.

As one of the 12 industries in the state with the highest numbers and rates of WMSDs, masonry contractors are one of the first industries that need to comply with the ergonomics rule, with their first compliance date being July 1, 2002.

### Goals

Here are the goals of the Spilker Masonry demonstration project:

- Spilker Masonry will demonstrate that the company can identify specific risk factors and hazards when working with the different types of scaffolding being used in the masonry business and which are covered by the ergonomics rule.
- Spilker Masonry will evaluate the amount of time being spent studying production issues with employees using two-handed (two-person) block laying for 12-inch-wide concrete blocks vs. one-handed (one-person) block laying.
- Identify ways to reduce or eliminate these hazards in compliance with the rule.
- Provide examples of ergonomic risk factors, hazards and controls to use in L&I training workshops for the industry.

### Project design

The project team included Spokane L&I staff and representatives from Spilker Masonry. The team was formed in May 2001, about one year after L&I adopted the ergonomics rule. Team members decided at the outset to focus solely on developing examples that could be used to meet the requirements of the proposed rule.

Spilker is a large masonry contractor, and does work throughout Eastern Washington and Northern Idaho. Spilker Masonry has agreed work with L&I to:

- Evaluate the following types of scaffolding in terms of the amount of time used with the different methods:
  - Standard welded-frame scaffolding
  - Tower scaffolding, including manual crank-up and power hydro-mobile scaffolding
- Track injuries occurring that may be related to the different types of scaffolding.
- Prepare a quarterly spreadsheet that documents activities and the amount of time spent working on this project.
- Prepare quarterly progress reports that will be shared with L&I consultation staff.

## Timetable

February 2001 .....Hold initial meeting with Spilker Masonry and the Associated General Contractors  
May 2001.....Outlined demonstration projects and set goals of project  
September 2001 .....Video worksites for scaffolding and block handling  
December 2001 .....Publish quarterly report for Region 6 L&I staff  
June 2002.....Complete demonstration project and compile information

## Results

The project will result in products L&I and other masonry contractors can use to help implement the ergonomics rule:

- Audiovisual materials (videotapes, photos and pictures) of the three types of scaffold systems. Documentation will show the WMSDs believed to be incurred while using the different types of scaffolding.
- Caution zone/hazard analyses of jobs/tasks using each scaffold type.
- Information on productivity and usability that may be related to each scaffold type.
- Audiovisual materials and documentation regarding the issues of employees using two-handed block-laying methods vs. employees using one-handed methods. Production data will be kept comparing the number of blocks set with each method. The company will make results available.
- A comparison of the WMSDs reported by employees while using the two different methods of block handling.